

CORRECTED VERSION

15 JUN 2005

**(19) World Intellectual Property Organization
International Bureau**



**(43) International Publication Date
22 July 2004 (22.07.2004)**

PCT

(10) International Publication Number
WO 2004/061449 A1

(51) International Patent Classification⁷: G01N 33/00,
33/14

(21) International Application Number:
PCT/IB2003/006442

(22) International Filing Date:
23 December 2003 (23.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
P-200300003 2 January 2003 (02.01.2003) ES

(71) Applicant (for all designated States except US): SOCIEDAD ESPAÑOLA DE CARBUROS METALICOS, S.A. [ES/ES]; Pl. Cívica, local P, 12., Univ. Autònoma CAMPUS UAB, 08193 BELLATERRA (ES).

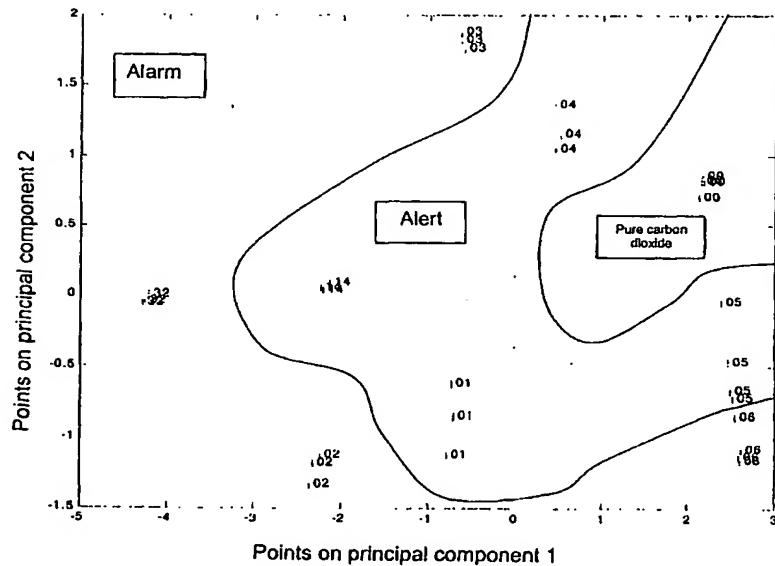
(72) Inventors; and

(75) Inventors/Applicants (for US only): VILANOVA, Xavier [ES/ES]; Universitat Rovira i Virgili, Escola

Tècnica Superior d'Enginyeria. Departament d'Enginyeria Electrònica, Elèctrica i Automàtica, Av. Països Catalans, 26 - Campus Sescelades, 43007 Tarragona (ES). **CORREIG, Xavier** [ES/ES]; Universitat Rovira i Virgili, Escola Tècnica Superior d'Enginyeria. Departament d'Enginyeria Electrònica, Elèctrica i Automàtica, Av. Països Catalans, 26 - Campus Sescelades, 43007 Tarragona (ES). **LLOBET, Eduard** [ES/ES]; Universitat Rovira i Virgili, Escola Tècnica Superior d'Enginyeria. Departament d'Enginyeria Electrònica, Elèctrica i Automàtica, Av. Països Catalans, 26 - Campus Sescelades, 43007 Tarragona (ES). **BREZMES, Jesús** [ES/ES]; Universitat Rovira i Virgili, Escola Tècnica Superior d'Enginyeria. Departament d'Enginyeria Electrònica, Elèctrica i Automàtica, Av. Països Catalans, 26 - Campus Sescelades, 43007 Tarragona (ES). **CALAVIA, Raul** [ES/ES]; Universitat Rovira i Virgili, Escola Tècnica Superior d'Enginyeria. Departament d'Enginyeria Electrònica, Elèctrica i Automàtica, Av. Països Catalans, 26 - Campus Sescelades, 43007 Tarragona (ES). **SANCHEZ, Xavier** [ES/ES]; S.E. de Carburos Metàlicos, S.A., Campus de la UAB, Plaça Cívica, local P12, 08193 Bellaterra (ES).

[Continued on next page]

(54) Title: ANALYZING SYSTEM FOR THE DETECTION OF REDUCING AND OXIDIZING GASES IN A CARRIER GAS WITH A METAL-OXIDE-SEMICONDUCTOR SENSOR ARRANGEMENT



(57) Abstract: Analyzing system for the detection of reducing and oxidizing gases in a carrier gas, characterized in that the detection means are sensors based on semiconductor-type metal oxides that work in the absence of oxygen, and in that said system includes means for connecting to a chamber which contains said sensors, and moreover in that the processing and control include system of real-time recognition of said gases, which provides a diagram in which the measurements taken on said carrier gas are situated and identified. Permits analysis of the gas in real time.



(74) Agents: PONTI SALES, Adelaida et al.; OFICINA PONTI, S.L., C. de Consell de Cent 322, 08007 BARCELONA (ES).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

— of inventorship (Rule 4.17(iv)) for US only

Declarations under Rule 4.17:

— as to the identity of the inventor (Rule 4.17(i)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

— with international search report

(48) Date of publication of this corrected version:

21 October 2004

(15) Information about Correction:

see PCT Gazette No. 43/2004 of 21 October 2004, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.